



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,773	09/30/2003	Victor C. Li	UOM 0286 PUS	4443

22045 7590 12/09/2004

BROOKS KUSHMAN P.C.
1000 TOWN CENTER
TWENTY-SECOND FLOOR
SOUTHFIELD, MI 48075

EXAMINER

MARCANTONI, PAUL D

ART UNIT	PAPER NUMBER
----------	--------------

1755

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,773

Applicant(s)

LI ET AL.

Examiner

Paul Marcantoni

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/13/04 response to restriction.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 14-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1755

Response to Restriction:

Applicant's election with traverse of Group I, claims 1-13 in the reply filed on 9/13/04 is acknowledged. The traversal is on the ground(s) that claim 1 is a linking claim and it is indirectly or directly dependent upon claim 1. This is not found persuasive because it is not the standard of requirement for showing of proper holding of restriction. The applicants claims 14-17 are directed to a composite which can include a further component such as the substrate the mortar itself is coated upon in this situation. The examiner has provided reasons of record in that the mortar can be used for "other" than the composite such as block, walkway, tile, reinforcement for post, column, etc. and the applicants have not traversed the proper reasons for restriction. In other words, the applicants have not traversed the proper holding of intermediate final product relationship.

It can be said that most "intermediate-final product" relationships for a restriction requirement are linking claims to one another but that does not overcome the proper holding for restriction. Should applicants state for the record that because these claims 1-17 are "linking" with one another and they are obvious variants, the examiner will examine all claims. The applicants are reminded, however, should they state these linking claims are obvious variants, if the examiner finds one of the inventions anticipated by the prior art, the admission may be used in a rejection of the other invention. If they do not state that both groups of invention are obvious variants, the rejection stands. The requirement is still deemed proper and is therefore made FINAL.

35 USC 102/103:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

It is noted that claim 1 requires no reinforcing fibers, viscosity control agent (optional), nor does it require aggregate. "Less than" claim language and "Up to" claim language is inclusive of zero as a lower limit. Thus these components need not be present.

Claims 1-13 are rejected under 35 U.S.C. 102(a and b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Drs et al. '681 or Burge et al. '774 or '123.

Drs et al. teach a spray mortar comprising polyalkylene oxide (possible Non-Newtonian additive), fibers (see example 4, col.6), sand, water, superplasticizer, and

Art Unit: 1755

aluminates and anticipates the instant invention (see col.5, line 19 for teaching of aluminate). It is the examiner's position that calcium aluminate is inclusive of the aluminates of the broad teaching of Drs et al. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Burge et al. (see '774 for example) also teach the same components as claimed by applicants for their invention which is a shotcrete or sprayed concrete comprising Portland cement and calcium aluminates, sand, superplasticizer, water, and other components such as further inorganic binder, aggregate, organic dispersing agents such as polyacrylic acid and polyacrylates, etc.

Claims 1,2,.4, and 5-12 are rejected under 35 U.S.C. 102(a and b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tjugum '386.

Tjugum teach a composition for spray concrete comprising cement, supeplasticizer, fibers, silica sand/silica fume, viscosity control agents ((col.3, lines 23-35), and water thus anticipating the instant invention. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Claims 1,2,4, 5, and 9-11 are rejected under 35 U.S.C. 102(a and b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sugiyama et al. (JP '252), Sytnik et al. (WO '534) or Mitkova (DE '476 or '477)

Art Unit: 1755

The remaining references all teach a sprayable concrete comprising Portland cement, superplasticizer, sand, coarse aggregate, and water thus anticipating the instant invention. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

35 USC 112 Second Paragraph:

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

Component (b) of claim 1 of "less than 4.0 volume percent" reads on potentially zero as a lower limit. Applicants may consider adding a lower limit of 0.1 volume percent as is stated on page 9, line 20 of the specification to resolve this issue.

Claim 1 is indefinite because the cement fraction can also be the inorganic Non-Newtonian additive (components a) and c)). The non-Newtonian additive can be calcium aluminate and claim 1 a) only requires cement fraction which also can be calcium aluminate. How do applicants distinguish between component a and c? This is thus vague and indefinite.

The applicants use of "optionally" in claim 1 f) contradicts what is stated on page 8, lines 20 which states that a viscosity control agent is generally necessary. If it is generally necessary, it seems that it should be added and not be optional. It also states that if the viscosity control agent is present, the specification requires it be present in amounts of from 0.1 to 5 wt% (page 8, lines 25-26 of specification).

Art Unit: 1755

Claim 3 is vague as it is unclear what other components are part of the non-newtonian additive. Does the additive comprise only calcium aluminate cement or other ingredients as well? If calcium aluminate is the only ingredient, applicants may consider amending "comprising" to --is--.

The same can be said with respect to claim 4 wherein said non-Newtonian additive comprises an organic polymer. Does the additive only comprise organic polymer or are there other unspecified ingredients? If organic polymer is the only ingredient, applicants may consider amending "comprising" to --is--.

The term "associative thickener" is vague in claim 5. Possible deletion of "associative" is advised.

The term "high" with respect to density polyethylene polymers in claim 8 is a relative and indefinite term as applicants do not define a specific range of density they deem high. Removal of "high density" would resolve this issue.

The term "modified" cellulose is not entirely clear. Do applicants mean that these are the same as the cellulose derivatives such as hydroxyethyl cellulose and methyl cellulose stated on lines 20-25 of page 8 of the specification.

Claim 13 is indefinite because it would not appear to teach the total parts by weight of the mortar composition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mark Bell, can be reached at 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Marcantoni
Primary Examiner
Art Unit 1755